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Post-Surgical Pyoderma Gangrenosum After Breast Surgery: A Case Series

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Abstract

Background:
Pyoderma gangrenosum (PG) is a rare inflammatory cutaneous disorder that is thought to be due to an innate immune system dysfunction, specifically of neutrophils. PG has been well documented in patients with autoimmune disorders like Ulcerative Colitis and Rheumatoid Arthritis. PG can also present in surgical patients, imitating a potential wound infection and necrotizing fasciitis. Although PG is a diagnosis of exclusion, prompt recognition is essential to attaining desired aesthetic outcomes, especially with breast involvement. We present a case series of four patients who developed PG following breast surgery. We analyze each patient's medical history, symptoms, wound progression and management in order to compare our path to diagnosis and treatment to the literature.

Methods:
The Pubmed database was strategically searched to find literature that is related to PG post breast surgery. 5 articles were identified from the search and 4 were selected as part of the systematic review for the study.

Results:
Of the 4 patients, only 2 patients had a history of autoimmune disease. 3 patients underwent debridement of their wounds. The average time from surgery to the onset of the symptoms was 11 days. The average time from the onset of symptoms to the correct diagnosis of PG was 41 days. Only 2 patients were diagnosed by tissue biopsies; the others were diagnosed clinically after failing multiple treatments targeted toward postoperative cellulitis. The average length of steroid therapy was 25 days. The average time from the initiation of steroids to complete wound closure was 51. The average time from the onset of symptoms to complete wound closure bilaterally was 87 days.

Discussion:
Post surgical PG after breast surgery is a difficult diagnosis to make. It should be suspected in patients who develop rapidly evolving, painful, necrotic ulcers at multiple surgical sites (usually sparing the nipple areolar complex) that present within the first 2 weeks postoperatively and lack a response to standard treatments for postoperative cellulitis. Prompt treatment with systemic steroids and/or immunosuppressive medications should be started in order to improve outcomes and minimize morbidity.